REMARKS

The Office Action, dated November 20, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 26-37 and 41-53 are currently pending in the application, of which claims 26, 41, and 50-54 are independent. Applicants herein amended claims 26-28, 30-31, 33-37, and 41-53 and added new claims 54-56 to more particularly point out and distinctly claim the subject matter of the present application. It is respectfully submitted that the amendments add no new subject matter to the present application and serve only to place the present application in better condition for examination. Entry of the amendments and reconsideration of the rejected pending claims are respectfully requested. It is believed that all grounds for rejection in the Office Action are currently addressed and that the present application is currently in condition for reconsideration in view of the amendment and the following arguments. Allowance of claims 26-37 and 41-56 is therefore respectfully requested.

Referring to the Office Action, all of the pending claims 26-37 and 41-53 were rejected under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 6,272,522 (Lin). According to the Office Action, Lin allegedly discloses all recitations of the pending claims. However, as described in greater detail below, Lin neither teaches nor suggests each and every limitation of independent claims 26, 41, and 50-54 and their dependent claims. Accordingly, the rejection of claims 26-37 and 41-53 should be withdrawn, and new claims 54-56 should be allowed.

Claim 26, from which claims 27-37 depend relates to a method that includes obtaining a current connection state as well as a current load state of each of a plurality of processors configured to perform communication in a packet switched connection from a data storage. Then, a load balancer configured to distribute load to said a processors selects, on a per packet basis, a processor in such a manner that a respective next packet is distributed to a processor having a lowest load irrespective of a specific connection to which this next packet belongs. Also, information is maintained about the load state of each processor so that said selecting is performed by selecting one of said processors to serve and process a respective packet based on the load state.

Claim 41, from which claims 42-49 depend, relates to an apparatus that includes storage configured to maintain a load state of each of a plurality of processors configured to perform communication in a packet switched connection. The apparatus further includes selection circuitry configured to select on a per packet basis, a processor on the basis of its load state in such a manner that a respective next packet is distributed to a processor having a lowest load irrespective of a specific connection to which this next packet belongs.

Independent claim 50 relates to a system. This system is configured to obtain a current connection state as well as a current load state of each of a plurality of processors configured to perform communication in a packet switched connection from data storage. The system is further configured to select, on a per packet basis, by a load balancer configured to distribute load to said processors, a processor in such a manner that a respective next packet is distributed to a processor having a lowest load irrespective of a

specific connection to which this next packet belongs. The system is also configured to maintain information about the load state of each processor so that said selecting comprises selecting one of said processors to serve and process a respective packet based on the load states.

Independent claims 51 relates a computer program embodied on a computer readable medium, where the computer readable medium storing code comprising computer executable instructions configured to perform a method that includes obtaining a current connection state as well as a current load state of each of a plurality of processors configured to perform communication in a packet switched connection from a data storage. Then, a load balancer configured to distribute load to said a processors selects, on a per packet basis, a processor in such a manner that a respective next packet is distributed to a processor having a lowest load irrespective of a specific connection to which this next packet belongs. Also, information is maintained about the load state of each processor so that said selecting is performed by selecting one of said processors to serve and process a respective packet based on the load state.

Independent claim 52 relates to a system that includes data storage and processors for performing communication in a packet switched connection. Also, at least one load balancer is configured to distribute distributing the load to said processors. Also the load balancer is configured to obtain a current connection state and a current load state of each of said processors from said data storage; maintain information about the load state of each of said processors; and select a processor in such a manner that a respective next packet is distributed to a processor having a lowest load irrespective of a specific

connection to which a respective packet belongs by selecting one of the processors to serve and process a respective packet based on the load state.

Independent claim 53 relates to a load balancer configured to obtain a current connection state and a current load state of each of a plurality of processors and to maintain information about the load state of each of said processors. The load balancer is further configured to select a processor on a per packet basis in such a manner that a respective next packet is distributed to a processor having a lowest load irrespective of a specific connection to which this next respective packet belongs by selecting one of the processors to serve and process a respective packet based on the load state of the selected processor.

Independent claim 54, from which claims 55 and 56 depend, relates to an apparatus that includes maintaining means for maintaining a load state of each of multiple processors performing a packet switched communication connection. The apparatus also includes selecting means for selecting, on a per packet basis, one of the processors on the basis of its load state in such a manner that a respective next packet is distributed to a processor having a lowest load irrespective of a specific connection to which a respective packet belongs.

Applicants have carefully reviewed Lin and respectfully submit that each of the above-noted independent claims recites subject matter that is not taught or disclosed by Lin. In particular, both the present application and Lin relate to load balancing by a controller among packet processing devices in a packet switched communication, but as

described in greater detail below, Lin discloses load balancing on a "per-connection" basis, whereas the present application considers this on a "per-packet" basis.

Although this distinction was identified in the previous response the Office Action was reluctant to acknowledge this difference. Specifically, the Office Action continued to refer to a sentence presented with the abstract of Lin, which stated that "the switching processors re-write the routing information included in the header portion of the data packets to reflect the selected one of the external networks." However, as described in greater detail below, this statement does not refer to a load balancing of the switching processors, but rather to a routing process of respective packets.

In order to still further emphasize the difference between the present invention and the teaching conveyed by the Lin reference, Applicants herein have amended claim 26 and the other pending independent claims 41 and 50-54 to further clarify that a processor having a lowest load (e.g. "free") is selected for processing the next packet irrespective of the specific connection to which this next packet belongs. Support for this amendment may be found, for example, (with reference to the corresponding published US application US2006/0053424A1) in paragraphs [0009] that describes the selection in "round-robin fashion", [0014] that describes that "a processing unit serves only one packet at a time"), and [0034] that describes that "the single processing units are not dedicated to serve a specific connection (or a call). Instead, the load balancing unit selects any free processing unit on a per packet basis". Thus, Applicants respectfully note that the present application the pending claims clearly relate to load balancing on a per-packet basis.

In contrast, Lin sets forth that the disclosed load balancing is based on a per-connection basis. For example, Lin discloses in Fig. 3 "a control processor to perform network load balancing" (col. 3, l. 34), where it is described in detail in col. 6, ll. 12-28, that: "each respective one of the switching processors 44_1 and 44_2 poll corresponding ones of the plural network interfaces 37_1-37_3 for incoming data packets 20 present on their respective receive queues....Since each of the switching processors 44_1 and 44_2 poll different ones of the network interfaces 37_1 -37_3." Thus, according to Lin, one switching processor polls a whole packet queue and not only a single packet so that the load balancing is clearly being effected on a per-connection basis.

This interpretation of Lin becomes even more apparent when considering the detailed description of a switching processor 44 shown in Fig. 4 of Lin, where this switching processor 44 is shown to comprise a packet engine module 72 and a packet filter module 74. The actions performed by the former one are depicted with the flow chart of Fig. 5 of the Lin reference, while the actions performed by the latter one are depicted with the flow chart of Fig. 6 of Lin.

Specifically, in consideration of the loop designated with reference numeral 112 in Fig. 5, it is held to be clearly apparent that a next packet processed by the packet engine module 72 of the switching processor 44 is taken from the same packet queue. See, also, Lin at col. 8, ll. 42-48, that provides that the disclosed method includes "determine[ing] whether additional packets are present at the network interface receive queue. If additional packets are present, the packet engine module 72 returns to step 108 and the second processing loop is repeated." Thus, if only one

packet queue would be present at any of the network interfaces according to the above-described disclosure in Lin, all packets of this queue would be processed by the same switching processor, whereas according to certain embodiments the present invention, the packets of this queue would be distributed to all switching processors, such as in a round-robin fashion.

As indicated above, the statement of the abstract to which the Office Action erroneously references is specifically related to the routing of the packets which is performed by the packet filter module 74. See, for example, col. 8, ll. 40-41, that describes that "the retrieved data packet is passed to the packet filter module 74 for routing."

In this way, this routing is actually described in connection with Fig. 6 of Lin that is, inter alia, described in col. 9, ll. 3-48. In this connection, Applicants note that this description cannot be mistaken as describing a packet-based load balancing, since the process clearly distinguishes its actions "whether the data packet is a new connection with the client" (see, col. 9, ll. 4-5) in which case "the packet filter module 74 may elect to send the data packet to the application server having the lightest current load" (see, col. 9, ll. 13-15), or "if it was determined ... that the received data packet was not a new connection with the client" (see, col. 9, ll. 33-34) in which case "the application server and application that is already servicing the connection" (see, col. 9, ll. 43-44) is selected.

Thus, Applicants respectfully assert that the interpretation of the Lin in the Office Action is technically incorrect, and that it is clear that Lin, in any case,

teaches a load balancing on a per-connection basis which suffers from the drawbacks of the conventional distribution techniques described in the present application, for example, at paragraphs [0004] and [0005].

Referring now to claim 26, in contrast to the description of Lin, the recited embodiment of the present application is based on a per-packet load distribution involving the advantages set forth in the section "summary of the invention" of the present application, which is even more strongly emphasized following the current amendments. Accordingly, the embodiment of the present application as recited in claim 26 offers significant technical benefits over Lin.

In conclusion, because Lin neither teaches nor suggests each and every limitation contained therein, claim 26 is consequently allowable over Lin. Reconsideration and allowance of claim 26 in view of these comments is respectfully requested. Claims 27-37 depend from claim 26, and because they include every limitation recited therein, are likewise allowable over Lin on similar grounds.

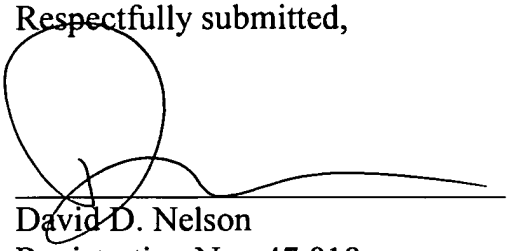
Independent claims 41 and 50-54, although of different in scope and although rejected in view of different sections of Lin than claim 26, recite similar limitations as related to a per packet basis of load balancing and should likewise be allowable for similar reasons. Dependent claims 42-49 claims should similarly be allowable as depending from allowable claim 41, and dependent claims 55-56 claims should similarly be allowable as depending from allowable claim 54. Reconsideration of the all the pending claims and allowance thereof is respectfully requested.

In conclusion, as discussed above, each of the pending claims now recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicants submit that the recited subject matter is more that sufficient to render the recited embodiments of the present invention non-obvious to a person of ordinary skill in the technical art of telecommunications. It is respectfully requested that claims 26-37 and 41-56 be allowed in view of the above arguments, comments, and remarks and the application padded to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claims Transmittal
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